

#2

0280

OIPE

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/766,154

DATE: 02/05/2001  
 TIME: 14:00:10

Input Set : A:\Pervfree.app  
 Output Set: N:\CRF3\02052001\I766154.raw

3 <110> APPLICANT: Patience, Clive  
 5 <120> TITLE OF INVENTION: Swine Defective for Transmission of Porcine Endogenous  
 6 Retrovirus and Uses Thereof  
 8 <130> FILE REFERENCE: 61750-311  
 C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/766,154  
 C--> 11 <141> CURRENT FILING DATE: 2001-01-19  
 13 <150> PRIOR APPLICATION NUMBER: U.S. 60/243695  
 14 <151> PRIOR FILING DATE: 2000-10-27  
 16 <150> PRIOR APPLICATION NUMBER: U.S. 60/182965  
 17 <151> PRIOR FILING DATE: 2000-02-16  
 19 <150> PRIOR APPLICATION NUMBER: U.S. 60/177003  
 20 <151> PRIOR FILING DATE: 2000-01-19  
 22 <160> NUMBER OF SEQ ID NOS: 33  
 24 <170> SOFTWARE: PatentIn Ver. 2.1  
 26 <210> SEQ ID NO: 1  
 27 <211> LENGTH: 600  
 28 <212> TYPE: DNA  
 29 <213> ORGANISM: Sus sp.  
 31 <400> SEQUENCE: 1  
 32 atgcacccca cgttaagccg gcgccacctc ccgattcggg gtggaaagcc gaaaagactg 60  
 33 aaaatccctt taagcttcgc ctccatcgcg tggttcctta ctctgtcaat aactcctcaa 120  
 34 gttaatggta aacgccttgt ggacagcccg aactcccata aaccttatac tctcacctgg 180  
 35 ttacttactg actccggtac aggtattaat attaacagca ctcaagggga ggctcccttg 240  
 36 gggacctggg ggctgaatt atatgtctgc ctccgatcag taatccctgg tctcaatgac 300  
 37 caggccacac ccccgatgt actccgtgct tacgggtttt acgtttgctc aggaccccca 360  
 38 aataatgaag aatattgcyg aaatcctcag gatttctttt gcaagcaatg gagctgcgta 420  
 39 acttctaagt atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480  
 40 ttgtttaaca atcctaccag ttataatcaa tttaattatg gccatgggag atggaaagat 540  
 41 tggcaacagc gggtaacaaa agatgtacga aataagcaaa taagctgtca ttcgttagac 600  
 44 <210> SEQ ID NO: 2  
 45 <211> LENGTH: 600  
 46 <212> TYPE: DNA  
 47 <213> ORGANISM: Sus sp.  
 49 <400> SEQUENCE: 2  
 50 atgcacccca cgttaagccg gcgccacctc ccgattcggg gtggaaagcc gaaaagactg 60  
 51 aaaatccctt taagcttcgc ctccatcgcg tggttcctta ctctgtcaat aactcctcaa 120  
 52 gttaatggta aacgccttgt ggacagcccg aactcccata aaccttatac tctcacctgg 180  
 53 ttacttactg actccggtac aggtattaat attaacagca ctcaagggga ggctcccttg 240  
 54 gggacctggg ggctgaatt atatgtctgc ctccgatcag taatccctgg tctcaatgac 300  
 55 caggccacac ccccgatgt actccgtgct tacgggtttt acgtttgccc aggaccccca 360  
 56 aataatgaag aatattgcyg aaatcctcag gatttctttt gcaagcaatg gagctgcgta 420  
 57 acttctaagt atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480  
 58 ttgtttaaca atcctaccag ttataatcaa tttaattatg gccatgggag atggaaagat 540  
 59 tggcaacagc gggtaacaaa agatgtacga aataagcaaa taagctgtca ttcgttagac 600  
 62 <210> SEQ ID NO: 3  
 63 <211> LENGTH: 540  
 64 <212> TYPE: DNA

ENTERED

RAW SEQUENCE LISTING                      DATE: 02/05/2001  
 PATENT APPLICATION: US/09/766,154              TIME: 14:00:10

Input Set : A:\Perfree.app  
 Output Set: N:\CRF3\02052001\I766154.raw

```

65 <213> ORGANISM: Sus sp.
67 <400> SEQUENCE: 3
68 atgcacccca cgttaagccg gcgccacctc cggattcggg gtggaaagcc gaaaagactg 60
69 aaaatcccct taagcttcgc ctccatcgcg tggttccctta ctctgtcaat aactcctcaa 120
70 gttaatggta aacgccttgt gaacagtcgg aactcccata aaccttatac tctcacctgg 180
71 ttacttactg actccggtac aggtattaat attaacagca ctcaagggga ggctcccttg 240
72 gggacctggt ggcctgaatt atatgtctgc cttegatcag taatccctgg tctcaatgac 300
73 caggccacac ccccgatgt actcgtgct tacgggtttt acgtttgcc aggaccccca 360
74 aataatgaag aatattgtgg aaatcctcag gatttctttt gcaagcaatg gagctgcgta 420
75 acttctaagt atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480
76 ttgtttaaca atcctaccag ttataatcaa tttaattatg gccatgggag atggaaagat 540
79 <210> SEQ ID NO: 4
80 <211> LENGTH: 600
81 <212> TYPE: DNA
82 <213> ORGANISM: Sus sp.
84 <400> SEQUENCE: 4
85 atgcacccca cgttaagccg gcgccacctc cggattcggg gtggaaagcc gaaaagactg 60
86 aaaatcccct taagcttcgc ctccatcgcg tggttccctta ctctgtcaat aactcctcaa 120
87 gttaatggta aacgccttgt gaacagtcgg aactcccata aaccttatac tctcacctgg 180
88 ttacttactg actccggtac aggtattaat attaacagca ctcaagggga ggctcccttg 240
89 gggacctggt ggcctgaatt atatgtctgc cttegatcag taatccctgg tctcaatgac 300
90 caggccacac ccccgatgt actcgtgct tacgggtttt acgtttgcc aggaccccca 360
91 aataatgaag aatattgtgg aaatcctcag gatttctttt gcaagcaatg gagctgcgta 420
92 acttctaagt atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480
93 ttgtttaaca atcctaccag ttataatcaa tttaattatg gccatgggag atggaaagat 540
94 tggcaacagc ggttacaaaa agatgtacga aataagcaaa taagctgtca ttctttagac 600
97 <210> SEQ ID NO: 5
98 <211> LENGTH: 599
99 <212> TYPE: DNA
100 <213> ORGANISM: Sus sp.
102 <400> SEQUENCE: 5
103 atgcacccca cgttaagccg gcgccacctc cggattcggg gtggaaagcc gaaaagactg 60
104 aaaatcccct taagcttcgc ctccatcgcg tggttccctta ctctgtcaat aactcctcaa 120
105 gttaatggta aacgccttgt gaacagtcgg aactcccata aaccttatac tctcacctgg 180
106 ttacttactg actccggtac aggtattaat attaacagca ctcaagggga ggctcccttg 240
107 gggacctggt ggcctgaatt atatgtctgc cttegatcag taatccctgg tctcaatgac 300
108 caggccacac ccccgatgt actcgtgct tacgggtttt acgtttgcc aggaccccca 360
109 aataatgaag aatattgtgg aaatcctcag gatttctttt gcaagcaatg gagctgcgta 420
110 acttctaagt atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480
111 ttgtttaaca atcctaccag ttataatcaa tttaattatg gccatgggag atggaaagat 540
112 tggcaacagc ggttacaaaa agatgtacga aataagcaaa taagctgtca ttctttagac 599
115 <210> SEQ ID NO: 6
116 <211> LENGTH: 599
117 <212> TYPE: DNA
118 <213> ORGANISM: Sus sp.
120 <400> SEQUENCE: 6
121 atgcacccca cgttaagccg gcgccacctc cggattcggg gtggaaagcc gaaaagactg 60
122 aaaatcccct taagcttcgc ctccatcgcg tggttccctta ctctgtcaat aactcctcaa 120
123 gttaatggta aacgccttgt gaacagtcgg aactcccata aaccttatac tctcacctgg 180

```

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/766,154

DATE: 02/05/2001  
 TIME: 14:00:10

Input Set : A:\Pervfree.app  
 Output Set: N:\CRF3\02052001\I766154.raw

```

124 ttacttactg actccggtac aggtattaat attaacagca ctcaaggga ggctccctg 240
125 gggacctggt ggctgaatt atagtctgc ctccgatcag taatccctg tctcaatgac 300
126 caggccacac ccccgatgt actccgtgct tacgggtttt acgtttgccc aggaccccca 360
127 aataatgaag aatattgtg aaatccctcag gatttctttt gcaagcaatg gagctgcgta 420
128 acttctaagt atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480
129 ttgtttaaca atcctaccag ttataatcaa tttaattatg gccatgggag atggaaagat 540
130 tggcaacagc ggtacaaaa agatgtacga aataagcaaa taagctgtca ttcgttaga 599
133 <210> SEQ ID NO: 7
134 <211> LENGTH: 600
135 <212> TYPE: DNA
136 <213> ORGANISM: Sus sp.
138 <400> SEQUENCE: 7
139 atgcacccca cgttaagccg gcgccacctc ccgattcggg gtggaaagcc gaaaagactg 60
140 aaaatccctt taagcttcgc ctccatcgcg tggttccctt ctctgtcaat aactccctca 120
141 gttaatggta aacgccttgt gaacagtcg aactcccata aaccttctc tctcaactgg 180
142 ttacttactg actccggtac aggtattaat attaacagca ctcaaggga ggctccctg 240
143 gggacctggt ggctgaatt atagtctgc ctccgatcag taatccctg tctcaatgac 300
144 caggccacac ccccgatgt actccgtgct tacgggtttt acgtttgccc aggaccccca 360
145 aataatgaag aatattgtg aaatccctcag gatttctttt gcaagcaatg gagctgcgta 420
146 acttctaagt atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480
147 ttgtttaaca atcctaccag ttataatcaa tttaattatg gccatgggag atggaaagat 540
148 tggcaacagc ggtacaaaa agatgtacga aataagcaaa taagctgtca ttcgttaga 600
151 <210> SEQ ID NO: 8
152 <211> LENGTH: 599
153 <212> TYPE: DNA
154 <213> ORGANISM: Sus sp.
156 <400> SEQUENCE: 8
157 atgcacccca cgttaagccg gcgccacctc ccgattcggg gtggaaagcc gaaaagactg 60
158 aaaatccctt taagcttcgc ctccatcgcg tggttccctt ctctgtcaat aactccctca 120
159 gttaatggta aacgccttgt gaacagtcg aactcccata aaccttctc tctcaactgg 180
160 ttacttactg actccggtac aggtattaat attaacagca ctcaaggga ggctccctg 240
161 gggacctggt ggctgaatt atagtctgc ctccgatcag taatccctg tctcaatgac 300
162 caggccacac ccccgatgt actccgtgct tacgggtttt acgtttgccc aggaccccca 360
163 aataatgaag aatattgtg aaatccctcag gatttctttt gcaagcaatg gagctgcgta 420
164 acttctaagt atgggaattg gaaatggcca gtctctcagc aagacagagt aagttactct 480
165 ttgtttaaca atcctaccag ttataatcaa tttaattatg gccatgggag atggaaagat 540
166 tggcaacagc ggtacaaaa agatgtacga aataagcaaa taagctgtca ttcgttaga 599
169 <210> SEQ ID NO: 9
170 <211> LENGTH: 599
171 <212> TYPE: DNA
172 <213> ORGANISM: Sus sp.
174 <400> SEQUENCE: 9
175 atgcacccca cgttaagccg gcgccacctc ccgattcggg gtggaaagcc gaaaagactg 60
176 aaaatccctt taagcttcgc ctccatcgcg tggttccctt ctctgtcaat aactccctca 120
177 gttaatggta aacgccttgt gaacagtcg aactcccata aaccttctc tctcaactgg 180
178 ttacttactg actccggtac aggtattaat attaacagca ctcaaggga ggctccctg 240
179 gggacctggt ggctgaatt atagtctgc ctccgatcag taatccctg tctcaatgac 300
180 caggccacac ccccgatgt actccgtgct tacgggtttt acgtttgccc aggaccccca 360
181 aataatgaag aatattgtg aaatccctcag gatttctttt gcaagcaatg gagctgcgta 420

```

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/766,154  
 DATE: 02/05/2001  
 TIME: 14:00:10

Input Set : A:\Pervfree.app  
 Output Set: N:\CRF3\02052001\I766154.raw

```

182 atttctaatag atgggaattg gaautggcca gtctctcagc aagacagaat aagttactct 480
183 ttltgttaaca atcctaccag ttataatcaa ttlaattatg gccatgggag atggaaagat 540
184 tggcaacagc gggtaacaaa agatgtacga aataagcaaa taagctgtca ttcgttaga 599
187 <210> SEQ ID NO: 10
188 <211> LENGTH: 599
189 <212> TYPE: DNA
190 <213> ORGANISM: Sus sp.
192 <400> SEQUENCE: 10
193 atgcatccca cgttaagccg ggcacacctc ccgattcggg gtggaaagcc gaaaagactg 60
194 aaaatccctt taagcttcgc ctccatcgcg tggttcccta ctctgtcaat aactcctcaa 120
195 gttaatggtg aacyccttgt ggacagcccg aactcccata aaccttate tctcacctgg 180
196 ttacttactg actccggtac aggtattaat attaacagca ctcaagggga ggtcccttg 240
197 gggacctggt ggcctgaatt atatgtctgc ctctgatcag taatccctgg tctcaatgac 300
198 caggccacac ccccgatgt actccgtgct tacgggtttt acgtttgccc aggaccccca 360
199 aataatgaag aatattgttg aaatcctcag gatttcttlt gcaagcaaty gagctgcgta 420
200 atttctaata atgggaattg gaaatggcca gtctctcagc aagacagaat aagttactct 480
201 ttltgttaaca atcctaccag ttataatcaa ttlaattatg gccatgggag atggaaagat 540
202 tggcaacagc gggtaacaaa agatgtacga aataagcaaa taagctgtca ttcgttaga 599
205 <210> SEQ ID NO: 11
206 <211> LENGTH: 458
207 <212> TYPE: DNA
208 <213> ORGANISM: Sus sp.
210 <400> SEQUENCE: 11
211 gacagcccca actccataa accctcatct ctacactggt tacttactga ctccggtaca 60
212 ggtattaata ttaacagcac tcaaggggag gctcccttgg ggacctggtg gcctgaatta 120
213 tatgtctgcc ttcgatcagt aatccctggt ctcaatgacc aggccacacc ccccgatgta 180
214 ctccgtgctt acgggtttta cgtttgcca ggaccccaaa ataatgaaga atattgtgga 240
215 aatcctcagg atttcttttg caagcaatgg agctgcgtaa ctctaatga tgggaattgg 300
216 aaatggccag tctctcagca agacagagta agttactctt ttgttaacaa tctacctat 360
217 aataatcaat ttaattatgg ccattggaga tggaaagatt ggcaacagcg ggtacaaaaa 420
218 gatgtacgaa ataagcaaat aagctgtcat tcgttaga 458
221 <210> SEQ ID NO: 12
222 <211> LENGTH: 478
223 <212> TYPE: DNA
224 <213> ORGANISM: Sus sp.
226 <400> SEQUENCE: 12
227 ttaatggtaa acgecttgtg gacagcccca actccataa acccttatct ctacactggt 60
228 tacttactga ctccggtaca ggtattaata ttaacagcac tcaaggggag gctcccttgg 120
229 ggacctggtg gcctgaatta tatgtctgcc ttcgatcagt aatccctggt ctcaatgacc 180
230 aggccacacc ccccgatgta ctccgtgctt acgggtttta cgtttgcca ggaccccaaa 240
231 ataatgaaga atattgtgga aatcctcagg atttcttttg caggcaatgg agctgcgtaa 300
232 ctctaatga tggaaattgg aaatggccag tctctcagca agacagagta agttactctt 360
233 ttgttaacaa tctaccagt tataatcaat ttaattatgg ccattggaga tggaaagatt 420
234 ggcaacagcg ggtacaaaaa gatgtacgaa ataagcaaat aagctgtcat tcgttaga 478
237 <210> SEQ ID NO: 13
238 <211> LENGTH: 478
239 <212> TYPE: DNA
240 <213> ORGANISM: Sus sp.
242 <400> SEQUENCE: 13

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/766,154

DATE: 02/05/2001

TIME: 14:00:10

Input Set : A:\Pervfree.app

Output Set: N:\CRF3\02052001\I766154.raw

```

243 tLaatggtaa acgccttgtg gacagcccg aactcccataa acccttatct ctcacctggt 60
244 tacttactga ctccggtaca ggtatttaata ttaacagcac tcaaggggag gctcccttgg 120
245 ggacctggtg gctgaatta tatgtctgcc ttcgatcagt aatccctggt ctcaatgacc 180
246 aggccacacc ccccgatgta ctccgtgctt acgggtttta cgtttgcccc ggaccccaaa 240
247 ataataaaga atattgtgga aatccctcagg atttcttttg caagcaatgg agctgcgtaa 300
248 cttctaataa tgggaattgg aaatggccag tctctcagca agacagagta agttactctt 360
249 ttgttaacaa tctaccagt tataatcaat ttaattatgg ccatgggaga tggaaagatt 420
250 ggcaacagcg ggtacaaaaa gatgtacgaa ataagcaaat aagctgtcat tcgttaga 478
253 <210> SEQ ID NO: 14
254 <211> LENGTH: 458
255 <212> TYPE: DNA
256 <213> ORGANISM: Sus sp.
258 <400> SEQUENCE: 14
259 gacagcccg aactcccataa acccttatct ctcacctggt tacttactga ctccggtaca 60
260 ggtatttaata ttaacagcac tcaaggggag gctcccttgg ggacctggtg gctgaatta 120
261 tatgtctgcc ttcgatcagt aatccctggt ctcaatgacc aggccacacc ccccgatgta 180
262 ctccgtgctt acgggtttta cgtttgcccc ggaccccaaa ataataaaga atattgtgga 240
263 aatccctcagg atttcttttg caagcaatgg agctgcgtaa cttctaataa tgggaattgg 300
264 aaatggccag tctctcagca agacagagta aqttactctt ttgttaacaa tctaccagt 360
265 tataatcaat ttaattatgg ccatgggaga tggaaagatt ggcaacagcg ggtacaaaaa 420
266 gatgtacgaa ataagcaaat aagctgtcat tcgttaga 458
269 <210> SEQ ID NO: 15
270 <211> LENGTH: 478
271 <212> TYPE: DNA
272 <213> ORGANISM: Sus sp.
274 <400> SEQUENCE: 15
275 ttaatggtaa acgccttgtg gacagcccg aactcccataa acccttatct ctcacctggt 60
276 tacttactga ctccggtaca ggtatttaata ttaacagcac tcaaggggag gctcccttgg 120
277 ggacctggtg gctgaatta tatgtctgcc ttcgatcagt aatccctggt ctcaatgacc 180
278 aggccacacc ccccgatgta ctccgtgctt acgggtttta cgtttgcccc ggaccccaaa 240
279 ataataaaga atattgtgga aatccctcagg atttcttttg caagcaatgg agctgcgtaa 300
280 cttctaataa tgggaattgg aaatggccag tctctcagca agacagagta agttactctt 360
281 ttgttaacaa tctaccagt tataatcaat ttaattatgg ccatgggaga tggaaagatt 420
282 ggcaacagcg ggtacaaaaa gatgtacgaa ataagcaaat aagctgtcat tcgttaga 478
285 <210> SEQ ID NO: 16
286 <211> LENGTH: 478
287 <212> TYPE: DNA
288 <213> ORGANISM: Sus sp.
290 <400> SEQUENCE: 16
291 ttaatggtaa acgccttgtg gactgcccg aactcccataa acccttatct ctcacctggt 60
292 tacttactga ctccggtaca ggtatttaata ttaacatcac tcaaggggag gctcccttgg 120
293 ggacctggtg gctgaatta tatgtctgcc ttcgatcagt aatccctggt ctcaatgacc 180
294 aggccacacc ccccgatgta ctccgtgctt acgggtttta cgtttgcccc ggaccccaaa 240
295 ataataaaga atattgtgga aatccctcagg atttcttttg caagcaatgg agctgcgtaa 300
296 cttctaataa tgggaattgg aaatggccag tctctcagca agacagagta agttactctt 360
297 ttgttaacaa tctaccagt tataatcaat ttaattatgg ccatgggaga tggaaagatt 420
298 ggcaacagcg ggtacaaaaa gatgtacgaa ataagcaaat aagctgtcat tcgttaga 478
301 <210> SEQ ID NO: 17
302 <211> LENGTH: 24

```

VERIFICATION SUMMARY                      DATE: 02/05/2001  
PATENT APPLICATION:    US/09/766,154              TIME: 14:00:11

Input Set : A:\Pervfree.app  
Output Set: N:\CRF3\02052001\I766154.raw

L:10 M:270 C: Current Application Number differs, Replaced Application Number  
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date